

IN THE CLAIMS:

- 1 1. (Original) A method for controlling calls in a telecommunication system comprising
2 the steps of:
3 defining a first switching model in which call control signaling and media
4 switching are effectively coupled;
5 defining a second switching model in which call control signaling and media
6 switching are effectively decoupled; and
7 at the initiation of a call or during the progress of the call assigning one of said
8 first and second switching models to said call.
- 1 2. (New) The method as in claim 1, wherein said telecommunication system is a con-
2 verged services platform (CSP).
- 1 3. (New) The method as in claim 1, further comprising the step of: configuring said
2 telecommunication system to switch substantially no bearer traffic during said second
3 switching model.
- 1 4. (New) The method as in claim 1, wherein said step of assigning is performed on a
2 call-by-call basis.
- 1 5. (New) The method as in claim 1, wherein said step of assigning is performed ac-
2 cording to a host message.
- 1 6. (New) The method as in claim 5, wherein said step of assigning defaults to a par-
2 ticular switching model in the event said host message is unavailable.

1 7. (New) The method as in claim 1, wherein said step of assigning is performed dy-
2 namically one or more times during said call.

1 8. (New) The method as in claim 1, further comprising the step of: providing media
2 resources arranged on a media server.

1 9. (New) The method as in claim 8, wherein said media resources are selected from a
2 group consisting of: generating tones, detecting tones, providing conferencing, record-
3 ing announcements, and playing announcements.

1 10. (New) The method as in claim 8, wherein said media server is co-located with
2 switching hardware of said telecommunication system.

1 11. (New) The method as in claim 8, wherein said media server is geographically re-
2 mote from said switching hardware of said telecommunication system.

1 12. (New) The method as in claim 1, further comprising the step of: modifying exist-
2 ing telecommunication switching platforms with operating software to meet capabilities
3 of assigning one of said first and second switching models to said call.

1 13. (New) The method as in claim 1, further comprising the step of: establishing an
2 early media path prior to receiving an answer to said initiation of said call.

1 14. (New) The method as in claim 13, wherein said early media path plays a recorded
2 announcement.

- 1 15. (New) The method as in claim 1, further comprising the step of: transitioning
2 between a 2-way voice path and a 2-way data path during said call.
- 1 16. (New) The method as in claim 15, wherein said data path is used for transmitting
2 data from a data communication device, such as a fax or modem.
- 1 17. (New) The method as in claim 1, further comprising the step of: augmenting a 2-
2 way voice path with a 2-way data path during said call.
- 1 18. (New) The method as in claim 17, wherein said data path is used for transmitting
2 data from a data communication device, such as a fax or modem.
- 1 19. (New) The method as in claim 1, wherein said telecommunication system is con-
2 figured as an interactive voice response (IVR) system.
- 1 20. (New) The method as in claim 19, wherein said IVR system provides a prepaid
2 calling service.
- 1 21. (New) The method as in claim 19, further comprising the steps of:
2 providing a two-way RTP voice path from a first session initiation protocol end-
3 point to a second telecommunication system having said interactive voice response sys-
4 tem;
5 establishing a two-way TDM voice path between said interactive voice response
6 system and with said second telecommunication system;
7 obtaining DTMF digits from said interactive voice response system;
8 after information is obtained from said interactive voice response system:

- 9 i) issuing messages to a second session initiation protocol end-point;
- 10 ii) establishing a two-way RTP voice path between said first session initiation
11 protocol end-point and said second session initiation protocol end-point;
12 and
- 13 iii) releasing said channel established between said interactive voice response
14 system and said second telecommunication system; and
- 15 establishing a two-way RTP voice path between said first end-point and said sec-
16 ond end-point.

1 22. (New) The method as in claim 1, wherein assigning said second switching model
2 further comprises the steps of:

3 establishing a two-way RTP voice path between a first session initiation protocol
4 end-point and a second session initiation protocol end-point, by said telecommunication
5 system performing the following:

- 6 i) receiving a message from said first end-point and in response thereto, is-
7 suing a Request for Service with a data message to an associated host,
8 with Session Description Protocol data of said first end-point contained
9 within said data message, via an application programming interface with
10 said host;
- 11 ii) receiving a Route Control message generated by said host, and in response
12 signaling a call to said second end-point using an available voice over IP
13 channel;
- 14 iii) issuing to said second end-point an invite message, which includes said
15 first end-point Session Description Protocol as data, and waiting for said
16 second end-point to return a ringing message;
- 17 iv) in response, issuing a ringing message to said first end-point and subse-
18 quently receiving from said second end-point, an OK message indicating

- 19 that said second end-point is available to accept said call initiated by said
20 first end-point;
- 21 v) issuing a message to said host with information regarding said first and
22 second end-points and waiting for said host to respond with a message in-
23 structing said telecommunication system to process said call in accordance
24 with said second switching model; and
- 25 vi) issuing further messages to establish a two-way RTP voice path between
26 said first and second end-points.

1 23. (New) The method as in claim 22, wherein said invite message is a SIP INVITE
2 message.

1 24. (New) The method as in claim 22, further comprising the step of: establishing an
2 early media path between said telecommunication system and said host to establish a
3 two-way RTP early voice path between said first and second end-points.

1 25. (New) The method as in claim 24, wherein said second end-point plays a recorded
2 announcement via said RTP early voice path.

1 26. (New) The method as in claim 25, wherein a media server is acting on behalf of
2 said second end-point.

1 27. (New) The method as in claim 22, further comprising the step of: transitioning
2 from said two-way RTP voice path to a two-way RTP data path upon said telecommuni-
3 cation system receiving a re-invite message from said second session initiation protocol
4 end-point.

1 28. (New) The method as in claim 27, wherein said re-invite message is a SIP RE-
2 INVITE message.

1 29. (New) The method as in claim 27, further comprising the steps of:
2 providing an internal media data transfer at said telecommunication system; and
3 issuing a re-invite message to said first end-point, to establish a two-way RTP
4 Data path between said first end-point and said second end-point.

1 30. (New) A telecommunication system comprising:
2 switching hardware having circuitry for operating under a first switching model
3 in which call control signaling and media switching are effectively coupled, and a second
4 switching model in which call control signaling and media switching are effectively de-
5 coupled; and
6 a processor to assign one of said first and second switching models to said call at
7 the initiation of a call or during the progress of the call.

1 31. (New) The telecommunication system as in claim 30, wherein said telecommuni-
2 cation system is a converged services platform (CSP).

1 32. (New) The telecommunication system as in claim 30, wherein said telecommuni-
2 cation system is configured to switch substantially no bearer traffic during said second
3 switching model.

1 33. (New) The telecommunication system as in claim 30, wherein said processor as-
2 signs said switching models on a call-by-call basis.

1 34. (New) The telecommunication system as in claim 30, wherein said processor as-
2 signs said switching models in response to a host message.

1 35. (New) The telecommunication system as in claim 34, wherein said step of assign-
2 ing defaults to a particular switching model in the event said host message is unavail-
3 able.

1 36. (New) The telecommunication system as in claim 30, wherein said processor as-
2 signs said switching models dynamically one or more times during said call.

1 37. (New) The telecommunication system as in claim 30, further comprising: a media
2 server for providing media resources.

1 38. (New) The telecommunication system as in claim 37, wherein said media re-
2 sources are selected from a group consisting of: generating tones, detecting tones, pro-
3 viding conferencing, recording announcements, and playing announcements.

1 39. (New) The telecommunication system as in claim 37, wherein said media server is
2 co-located with switching hardware of said telecommunication system.

1 40. (New) The telecommunication system as in claim 37, wherein said media server is
2 geographically remote from said switching hardware of said telecommunication system.

1 41. (New) The telecommunication system as in claim 30, further comprising: operat-
2 ing software for modifying existing telecommunication switching platforms to meet ca-
3 pabilities of assigning one of said first and second switching models to said call.

1 42. (New) The telecommunication system as in claim 30, wherein an early media path
2 is established prior to receiving an answer to said initiation of said call.

1 43. (New) The telecommunication system as in claim 42, wherein said early media
2 path is utilized for playing a recorded announcement.

1 44. (New) The telecommunication system as in claim 30, wherein said switching
2 hardware transitions between a 2-way voice path and a 2-way data path during said call.

1 45. (New) The telecommunication system as in claim 30, wherein said switching
2 hardware augments a 2-way voice path with a 2-way data path during said call.

1 46. (New) The telecommunication system as in claim 44, wherein said data path is
2 used for transmitting data from a data communication device, such as a fax or modem.

1 47. (New) The telecommunication system as in claim 30, wherein said telecommuni-
2 cation system is configured as an interactive voice response (IVR) system.

1 48. (New) The telecommunication system as in claim 47, wherein said IVR system
2 provides a prepaid calling service.

1 49. (New) A telecommunication system comprising:
2 means for defining a first switching model in which call control signaling and
3 media switching are effectively coupled;

4 means for defining a second switching model in which call control signaling and
5 media switching are effectively decoupled; and
6 means for assigning one of said first and second switching models to said call at
7 the initiation of a call or during the progress of the call.